National Institute of Environmental Health Sciences

Regional health system response to the 2007 Greensburg, Kansas, EF5 tornado

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Abstract:

BACKGROUND: On May 4, 2007 an EF5 tornado hit the rural community of Greensburg, KS, destroying 95% of the town and resulting in 12 fatalities. METHODS: Data was requested from the emergency medical services units that initially responded and the regional hospitals that received people injured in the tornado within 24 hours following the tornado. Requested data included patient age and sex, and injury severity score or ICD-9 codes. Critical mortality, or the number of deaths of critically injured patients, was also calculated. RESULTS: The extensive damage caused by the tornado effectively destroyed the infrastructure of the community and created enormous challenges for emergency medical services responders, who were unable to record any triage data. Area hospitals treated 90 patients, who had an average injury severity score of 6.4. Age was found to be related to injury severity, but no relationship between sex and injury severity was found. Critical mortality was found to be 18% for this event. CONCLUSIONS: Injury severity score has seldom been used to analyze natural disasters, especially tornadoes, although such analysis is helpful for understanding the magnitude of the disaster, comparing to other disasters, and preparing for future incidents. Advanced warning and personal preparedness are important factors in reducing tornado-related injuries and deaths.

Source: http://dx.doi.org/10.1097/DMP.0b013e31815901dc

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Health Professional

Early Warning System: ☑

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☑

weather or climate related pathway by which climate change affects health

Extreme Weather Event

Extreme Weather Event: Hurricanes/Cyclones

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

United States

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Injury

Medical Community Engagement: ☑

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status, Racial/Ethnic Subgroup

Other Racial/Ethnic Subgroup: Not specified

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content